REGULATION 6.07 Standards of Performance for Existing Indirect Heat Exchangers

Air Pollution Control District of Jefferson County
Jefferson County, Kentucky

Relates To: KRS Chapter 77 Air Pollution Control
Pursuant To: KRS Chapter 77 Air Pollution Control
Necessity And Function: KRS 77.180 provides that the Air Pollution Control Board may make and enforce all needful orders, rules, and regulations necessary or proper to accomplish the purposes of KRS Chapter 77. This regulation provides for the control of emissions from indirect heat exchangers.

SECTION 1 Applicability
This regulation applies to each indirect heat exchanger of 1 million or more BTU per hour heat input which was in being or under construction before April 19, 1972. The combined total heat input capacity of all affected facilities subject to this regulation shall be used to determine the total allowable emissions from a source regardless of boiler or stack configuration.

SECTION 2 Definitions
Terms used in this regulation not defined herein shall have the meaning given them in Regulation 1.02.

2.1 "Indirect Heat Exchanger" means any piece of equipment, apparatus, or contrivance used for the combustion of fuel in which the energy produced is transferred to its point of usage through a medium that does not come in contact with or add to the products of combustion.

SECTION 3 Standard For Particulate Matter

3.1 No owner or operator subject to this regulation shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of the quantity specified in Table 1.

3.2 No owner or operator subject to this regulation shall cause the emission into the open air of particulate matter from any indirect heat exchanger which is greater than 20% opacity.

3.3 Section 3.2 shall not apply to:

3.3.1 Emissions into the open air of particulate matter from any indirect heat exchanger during building a new fire, cleaning the fire box, or blowing soot for a period or periods aggregating not more than ten minutes in any 60 minutes which are less than 40% opacity;

3.3.2 Emissions from waterwall spreader-stoker indirect heat exchangers during startup operations if the emissions do not exceed the following limits:

3.3.2.1 First 30 minutes - 80% opacity;

3.3.2.2 Next hour - 60% opacity; and

3.3.2.3 Next 2½ hours - 40% opacity.

3.3.3 Emissions up to 40% opacity from all other waterwall indirect heat exchangers for any 30-minute period during startup operations.

SECTION 4 Standard for Sulfur Dioxide

4.1 No owner or operator subject to this regulation shall cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of the weights listed in Table 2.

4.2 When different fuels are burned simultaneously in any combination, the applicable standard shall be determined by proration using the following formula:

Allowable sulfur dioxide emission in pounds per million BTU per hour heat input = $\frac{ya + zb}{y + z}$

where:

- y = the percent of total heat input derived from liquid fuel.
- a = the allowable sulfur dioxide emission in pounds per million BTU heat input derived from liquid fuel.
- z = the percent of total heat input derived from solid fuel.
- b = the allowable sulfur dioxide emission in pounds per million BTU heat input derived from solid fuel.

4.3 Compliance shall be based on the total heat input from all fuels burned, including gaseous fuels.

Adopted v1/4-19-72; effective 4-19-72; amended v2/9-1-76, v3/6-13-79.

	Date Submitted	Date Approved	Federal Register
Original Reg:	06/29/79	01/25/80	45 FR 6092
1st Revision:	07/20/99	[insert date]	[insert FR]

Table 1 To Regulation 6.07

Allowable Particulate Emission Rates

Heat Input MM Btu/Hour	Maximum Particulate Emission Rates Pounds per Million Btu Input
10 or less	0.56
50	0.38
100	0.33
250	0.26
500	0.22
1,000	0.19
2,500	0.15
5,000	0.13
7,500	0.12
10,000 or more	0.11

Interpolation of allowable emissions for intermediate heat input values not specified above may be accomplished by use of the equation shown below for the appropriate fuel and heat input range specified. In all equations X = millions of BTU per hour heat input and Y = allowable particulate emissions in pounds per million BTU heat input.

$$Y = 0.9634\ X^{-0.2356}$$

Table 2 To Regulation 6.07

Allowable Sulfur Dioxide Emissions
Based On Heat Input Capacity

MM Btu/Hour Heat Input	Pounds SO_2 per Million Btu Heat Input	
	Liquid or Gaseous Fuel	Solid Fuel
10 or less	1.0	4.0
50	1.0	2.2
100	1.0	1.7
150	1.0	1.4
200	0.9	1.3
250 or more	0.8	1.2

Interpolation of allowable emissions for intermediate heat input values not specified in the table may be accomplished by use of the following equations for appropriate fuel and heat input specified:

Liquid or Gaseous Fuel: $Y = 7.722\ X^{-0.4106}$

Solid Fuel: $Y = 9.46\ X^{-0.3740}$

where:

Y = allowable sulfur dioxide emissions in pounds per million BTU per hour heat input.

X = millions of BTU per hour heat input capacity rating.